

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Figs 1 to 2 replaces the original sheet including Figs. 1 to 2. In the new Fig. 1, a reference character BETA replaces one instance of reference character PHI.

Attachment: One Replacement Sheet (1) of Drawings

### **REMARKS**

The specification was objected to as failing to provide proper antecedent basis for the claimed subject matter. Claims 26, 28 and 31 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 26, 28 and 31 were rejected under 35 U.S.C. 102(e) as being anticipated by Sasu et al. (U.S. Pat. No. 6,935,817). Claims 26, 28 and 31 were rejected under 35 U.S.C. 102(b) as being anticipated by Hunt (GB 2276575).

The specification has been amended at paragraph [0019]. Fig. 1 has been amended to replace one instance of reference character PHI with a reference character BETA. Support for the amendments to the specification and the drawings is found in the original claims, for example.

Claims 26 and 28 have been amended. Support for amended claims 26 and 28 is found in paragraph [0018] and amended paragraph [0019]. Claim 27 has been canceled without prejudice.

Reconsideration of the application based on the following remarks is respectfully requested.

#### **Objection to the Specification**

The specification was objected to as failing to provide proper antecedent basis for the claimed subject matter.

The specification has been amended at paragraph [0019] to provide proper antecedent basis. Support is found in the original claims, for example.

Withdrawal of the objection to the specification is respectfully requested.

#### **Rejection under 35 U.S.C. 112, second paragraph**

Claims 26, 28 and 31 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite.

Claims 26 and 28 have been amended and are now submitted as clear and definite.

Withdrawal of the rejection under 35 U.S.C. 112, second paragraph, of claims 26, 28 and 31 is respectfully requested.

Rejection under 35 U.S.C. 102(e)

Claims 26, 28 and 31 were rejected under 35 U.S.C. 102(e) as being anticipated by Sasu et al. (U.S. Pat. No. 6,935,817).

Sasu et al. discloses “a workpiece 10 in the exemplary form of a solid disc in the process of being machined into a gas turbine engine rotor including a plurality of circumferentially spaced-apart airfoil blades 12 extending integrally radially outwardly from a central hub portion 14. Each blade 12 has a generally concave pressure side 16 and a generally convex suction side 18 extending from root 20 to tip 22 between opposed leading and trailing edges 24 and 26. The workpiece 10 is machined in a numerically controlled multi-axis machine (not shown) adapted to operate a circular or annular machining tool, for instance, in the form of a cup mill 28 having a cup-shaped body 30 carrying a plurality of circumferentially spaced-apart cutting inserts 32 defining a cutting ring of a radius preferably close to the desired radius of curvature of the airfoil blades 12 to be machined in the workpiece 10.” (Col. 3, lines 11 to 26; Fig. 1)

Claim 26, as amended, recites “[a] method for milling recesses into a workpiece, comprising:

providing a milling tool, the milling tool including a base body and at least one cutting body situated on an outer periphery of the base body, the at least one cutting body being angled away from the base body such that the at least one cutting body is angled away from a rotation axis of the milling tool, the base body being disk shaped or plate shaped; and

milling recesses into a workpiece with the milling tool;

wherein during milling, the rotation axis of the milling tool and a surface of the workpiece into which a circular recess is milled define a first acute angle, the surface of the workpiece into which the circular recess is milled being planar.”

It is respectfully submitted that Sasu et al. does not disclose “the at least one cutting body being angled away from the base body such that the at least one cutting body is angled away from a rotation axis of the milling tool” as now recited in claim 26. Cup mill 28 of Sasu et al. includes cutting inserts 32 that are perpendicular with respect a base body of cup mill 28 and thus are not “angled away from the base body” as required by claim. (See Fig. 1) Also, cutting inserts 32 Sasu et al. are aligned parallel to center axis 34 of cup mill 28 Sasu et al. (See Fig. 1)

Thus, cutting inserts 32 are not “angled away” from central axis 34, as required by claim 26. Also, the surface being milled in Sasu et al. is not “planar” as now required by claim 26. Because Sasu et al. does not disclose each and every limitation of claim 26, Sasu et al. does not anticipate claim 26.

Withdrawal of the rejection under 35 U.S.C. 102(e) of claim 26, and claims 28 and 31 depending therefrom, is respectfully requested.

Rejection under 35 U.S.C. 102(b)

Claims 26, 28 and 31 were rejected under 35 U.S.C. 102(b) as being anticipated by Hunt (GB 2276575).

Hunt discloses “an apparatus for producing an integrally bladed compressor rotor from a disc shaped workpiece comprises two annular cutters 20, 30 rotatable about respective axes 21, 31. The axes 21, 31 of the annular cutters 20, 30 are parallel and one annular cutter 30 surrounds the other annular cutter 20. A disc shaped workpiece 14 is placed on a workpiece holder and the workpiece holder moves the workpiece 14 axially relative to the annular cutters 20, 30 so that the annular cutter 20 cuts out material at the periphery of the workpiece 14 to form a concave aerofoil surface of a blade 16 and the annular cutter 30 cuts out material at the periphery of the workpiece 14 to form a convex aerofoil surface of the blade 16. The annular cutters 20, 30 are moved relatively while their axes 21, 31 remain parallel by a pair of rotating cams 56, 62 so that the shapes of the concave and convex aerofoil surfaces of the blade 16 may be varied.” (Abstract).

Claim 26, as amended, recites “[a] method for milling recesses into a workpiece, comprising:

providing a milling tool, the milling tool including a base body and at least one cutting body situated on an outer periphery of the base body, the at least one cutting body being angled away from the base body such that the at least one cutting body is angled away from a rotation axis of the milling tool, the base body being disk shaped or plate shaped; and

milling recesses into a workpiece with the milling tool;

wherein during milling, the rotation axis of the milling tool and a surface of the

workpiece into which a circular recess is milled define a first acute angle, the surface of the workpiece into which the circular recess is milled being planar.”

It is respectfully submitted that Hunt does not disclose “during milling, the rotation axis of the milling tool and a surface of the workpiece into which a circular recess is milled define a first acute angle” as now recited in claim 26. Hunt discloses two annular cutters 20, 30 having respective axes 21, 31 that are perpendicular to a surface of a rotor disc blank 14 to be milled. Thus respective axes 21, 31 of annular cutters 20, 30 and a surface of rotor disc blank 14 to be milled do not “define a first acute angle” as now required by claim 26. Also, the surface being milled in Hunt is not “planar” as now required by claim 26. Because Hunt does not disclose each and every limitation of claim 26, Hunt does not anticipate claim 26.

Withdrawal of the rejection under 35 U.S.C. 102(b) of claims 26, and claims 28 and 31 depending therefrom, is respectfully requested.

**CONCLUSION**

It is respectfully submitted that the application is in condition for allowance and applicants respectfully request such action.

If any additional fees are deemed to be due at this time, the Assistant Commissioner is authorized to charge payment of the same to Deposit Account No. 50-0552.

Respectfully submitted,

DAVIDSON, DAVIDSON & KAPPEL, LLC

By: 

William C. Gehris (Reg. No. 38,156)

Davidson, Davidson & Kappel, LLC  
485 Seventh Avenue, 14<sup>th</sup> Floor  
New York, New York 10018  
(212) 736-1940